

REMARKS

Claims 1-23 are pending in the application.

Claims 1-23 have been rejected.

The drawings have been amended to correct minor informalities as indicated above.

Reconsideration of the Claims is respectfully requested.

1. Objections

The drawings were objected to due to minor informalities. Appropriate correction has been made.

2. Rejection under 35 U.S.C. 103(a)

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. MPEP § 2142, p. 2100-128 (Rev. 2, May 2004) (citations omitted).

a. Claims 1, 7-9, 15, and 21-23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application 2002/0067704 to Ton ("Ton") in view of Perkins "*IP Mobility Support*".

Ton recites a "network [that] will have a number of Mobile Nodes attached to the network. Each Mobile Node will have an IP address and be attached to the network through a Home Agent. When visiting another network a Mobile Node will register with that network through a Foreign Agent. The network will provide a number of Home Agents through which the Mobile Node may register, although the Mobile Node will be statically configured to register with a given Home Agent." (Ton ¶ 0023).

To avoid Home Agent failure following mobile node registration, Ton calls for "an additional Mobile IP extension [that] is added to the registration reply message[that allows] the Mobile Node . . . to select a new secondary Home Agent to perform registration with in case the primary Home Agent fails." (Ton ¶ 0028). Another alternative to avoid Home Agent failure following mobile node registration, Ton

calls for “a dedicated hot standby or shared redundancy Home Agent . . .” (Ton ¶ 0028; Fig. 4 (“illustrating a flow of messages”); *see also* ¶ 0045 (“alternately using error code 136 . . .”)).

In other words, Ton recites activity following registration. After the MN is registered, and the primary Home Agent finds a less busy Home Agent, then it provides the MN with “an additional Mobile IP extension is added to the registration reply message.” Following registration, if the primary Home Agent fails or there is a less busy Home Agent, the MN then pursues an alternate Home Agent.

Perkins, “*IP Mobility Support*,” relates to “protocol enhancements that allow transparent routing of IP datagrams to mobile nodes in the Internet. Each mobile node is always identified by its home address, regardless of its current point of attachment to the Internet. While situated away from its home, a mobile node is also associated with a care-of address which provides information about its current point of attachment to the Internet.” (Perkins, “*IP Mobility Support*, page 1 (Abstract)).

Under Perkins, “*IP Mobility Support*,” the support services for Mobile IP are defined as providing “Agent Discovery” where “[h]ome agents and foreign agents may advertise their availability on each link for which they provide service. A newly arrived mobile node can send a solicitation on the link to learn if any prospective agents are present,” and “Registration,” where “[w]hen the mobile node is away from home, it registers its care-of address with its home agent. Depending on its method of attachment, the mobile node will register either directly with its home agent, or through a foreign agent which forwards the registration to the home agent.” (Perkins, “*IP Mobility Support*, at p. 7, § 1.7).

Perkins recites a Home Agent as “[a] router on a mobile node’s home network which tunnels datagrams for delivery to the mobile node when it is away from home, and maintains current location information for the mobile node.” (*Id.* at p. 4, § 1.5). Section 3.6 of Perkins, “*IP Mobility Support*,” recites that “a mobile node MAY be configured with the IP address of one or more of its home agents; otherwise, the mobile node MAY discover a home agent using the procedures described in Section 3.6.1.2.” (Perkins, “*IP Mobility Support*, p. 33, § 3.6); however, Applicant respectfully submits these home agents, as understood, are primary home agents in that “[a] home agent MUST always be prepared to serve the mobile nodes for which it is the home agent.” (*Id.* at p. 16) (original emphasis). In other words, the Home Agent of Perkins would not be in an inoperable state (*see also*, Perkins, “*IP Mobility Support*,” at p. 31 (“Registration denied by the home agent”)). Accordingly, Perkins does not address instances where the home agent is inoperable and subsequent actions taken by a mobile node to gain connectivity. ***Neither Ton nor Perkins addresses “failing to achieve registration,” and subsequently “attempting registration with a secondary home agent.”***

In contrast, Applicant's Independent Claim 1 recites, *inter alia*, a "method for registering a subscriber unit with a home agent in a cellular system, the method comprising: storing addresses for a plurality of home agents in the subscriber unit, wherein the plurality of home agents includes a primary home agent and a plurality of secondary home agents; . . . failing to achieve registration with the primary home agent; the subscriber unit selecting a secondary home agent from the plurality of secondary home agents . . . and attempting registration with the secondary home agent."

Also, Applicant's Independent Claim 15 recites, *inter alia*, a "subscriber unit that operates within a cellular system, the subscriber unit comprising: an antenna; a radio frequency unit coupled to the antenna; and at least one digital processor coupled to the radio frequency unit that executes software instructions causing the subscriber unit to: store addresses for a plurality of home agents in the subscriber unit, wherein the plurality of home agents includes a primary home agent and a plurality of secondary home agents; attempt registration with the primary home agent; failing to achieve registration with the primary home agent; . . . and attempt registration with the secondary home agent."

Accordingly, there is no suggestion or motivation to modify the post-registration redundancy device of Ton in view of the protocol enhancements of Perkins, "*IP Mobility Support*," to achieve Applicant's invention recited in the method Independent Claim 1 or the subscriber unit of Independent Claim 15, much less teach or suggest all the claim limitations. Applicant respectfully submits that a *prima facie* case of obviousness exists with respect to Claim 1 and Claims 7-9 that depend therefrom, and Claim 15 and Claims 21-23 that depend therefrom, by the hypothetical combination of Ton in view of Perkins, "*IP Mobility Support*," and requests withdrawal of the rejection.

b. Claims 2, 3, 10, 11, 16 and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ton in view of Perkins, "*IP Mobility Support*," and further in view of U.S. Publication No. 2002/0078238 ("Troxel").

Claims 2 and 3 depend directly or indirectly from Independent Claim 1. Claims 16 and 17 depend directly or indirectly from Independent Claim 15. In that the hypothetical combination of Ton in view of Perkins, "*IP Mobility Support*," do not substantiate a *prima facie* case of obviousness as to Claims 1 and 15, Applicant respectfully submits that a *prima facie* case of obviousness is not substantiated through the addition of Troxel as to claims 2, 3, 16, and 17.

Troxel recites an "invention [that] can enable nodes on a foreign subnetwork to exchange messages." (Troxel ¶ 0016). With foreign agents, Troxel allows rankings of foreign agents "based, for example, on services offered by the agents, capacity, signal strength, and so forth." (Troxel ¶ 51).

But Applicant's Independent Claim 10 recites a "method for registering a subscriber unit with a home agent in a cellular system, the method comprising: storing addresses for a plurality of home agents in the subscriber unit, wherein the plurality of home agents includes a primary home agent and a plurality of secondary home agents; attempting registration with the primary home agent; failing to achieve registration with the primary home agent; the subscriber unit rank ordering the plurality of secondary home agents into at least a first secondary home agent and a second secondary home agent in an attempt to balance load among the plurality of secondary home agents; and attempting registration with the first secondary home agent."

Accordingly, there is no suggestion or motivation to modify the post-registration redundancy device of Ton in view of the protocol enhancements of Perkins, "*IP Mobility Support*," and further in view of the foreign agent ("FA") ranking device of Troxel, to achieve Applicant's invention recited in the method of Independent Claim 10, much less teach or suggest all the claim limitations. Applicant respectfully submits that a *prima facie* case of obviousness exists with respect to Claims 2 and 3, which depend directly or indirectly from Independent Claim 1, Claim 10 and 11 that depends therefrom, and Claims 16 and 17 depend directly or indirectly from Independent Claim 15, by the hypothetical combination of Ton in view of Perkins, "*IP Mobility Support*," in further view of Troxel and requests withdrawal of the rejection.

c. Claims 4 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ton in view of Perkins, "*IP Mobility Support*," and further in view of Troxel, further in view of Jue et al., "*Design & Analysis of Replicated Server Architecture for Supporting IP-Host Mobility*" ("Jue"), even further in view of U.S. Patent No. 6,615,050 to Tiedmann et al. ("Tiedmann").

Claims 5, 6, 13, and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ton in view of Perkins, "*IP Mobility Support*," and further in view of Troxel, further in view of Perkins "*Mobile Networking through Mobile IP*", and even further in view of U.S. Patent No. 5,590,092 to Fehnel ("Fehnel").

Claims 19-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ton in view of Perkins, "*IP Mobility Support*", further in view of Troxel, and further in view of Perkins, "*Mobile Networking through Mobile IP*."

Claim 18 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ton in view of Perkins, "*IP Mobility Support*," further in view of Troxel, and further in view of Jue.

These rejections are respectfully traversed in that, as shown below, there is no suggestion or motivation to modify the post-registration redundancy device of Ton in view of the protocol enhancements of Perkins, "*IP Mobility Support*," to achieve Applicant's invention of its Independent Claims 1 and 15, and further in view of the foreign agent ranking device of Troxel with regard to

Independent Claim 10, to achieve Applicant's claimed invention. Further, it is respectfully submitted that in several instances, much less teach or suggest all of Applicant's claim limitations. Applicant respectfully submits that its disclosure was improperly used as a blue print to bring disassociated references to form an improper basis for rejection of Applicant's claimed invention.

Jue recites "[m]obility supporting IP networks [that] requires servers to forward packets to mobile hosts and to maintain information pertaining to a mobile host's location in the network." (Jue, Abstract). That is, post-registration activities.

Tiedmann relates to a cellular telephone "system for increasing the reliability of the cellular telephone system in environments having substantial multipath propagation or under conditions wherein a large number of mobile telephone units simultaneously attempt to access a base station." (Tiedmann 1:18-24). Specifically, Tiedmann relates to "[reducing] interference between multiple spread-spectrum transmitters operating simultaneously" (Tiedmann 3:12-15). Tiedmann appears disassociated from the aspects of Applicant's invention.

Perkins recites that "Mobile IP requires the existence of a network node known as the home agent. Whenever the mobile node is not attached to its home network (and is therefore attached to what is termed a foreign network), the home agent gets all the packets destined for the mobile node and arranges to deliver them to the mobile node's current point of attachment." (Perkins, "Mobile Networking through Mobile IP," at p. 59). That is, Perkins does not address home agent inoperability.

Fehnel recites "an object . . . to provide methods and systems for generating a current time of day in a cellular radiotelephone. (Fehnel 2:20-22).

Claims 4-6 depend directly or indirectly from Independent Claim 1. Claims 12-14 depend directly or indirectly from Independent Claim 10. Claims 18-10 depend directly or indirectly from Independent Claim 15. In that Ton in view of Perkins, "IP Mobility Support," does not provide a *prima facie* case of obviousness with respect to Independent Claims 1 and 15, the addition of supplemental references, as respectfully submitted, do not cure the deficiency of the lack of a *prima facie* case of obviousness as to the claims that depend from these independent claims. Accordingly, Applicant respectfully requests that the rejection to these claims be withdrawn.

Claim 12-14 depends directly or indirectly from Independent Claim 10. In that Ton, in view of Perkins, "IP Mobility Support," in further view of Troxel does not provide a *prima facie* case of obviousness with respect to Independent Claims 10, the addition of supplemental references, as

respectfully submitted, do not cure the deficiency of the lack of *prima facie* case of obviousness as to the claims that dependent from Independent Claim 10. Accordingly, Applicant respectfully requests that the rejection to these claims be withdrawn.

Generally, Ton does not provide a basis for establishing a *prima facie* obviousness rejection. Under Ton, Home Agent registration failure is avoided by appending “an additional Mobile IP extension [that] is added to the registration reply message [that allows] the Mobile Node . . . to select a new secondary Home Agent to perform registration with in case the primary Home Agent fails.” (Ton ¶ 0028). As another alternative to avoid Home Agent registration failure, Ton calls for “a dedicated hot standby or shared redundancy Home Agent” (Ton ¶ 0028).

Accordingly, Applicant respectfully submits that there is no suggestion or motivation in the post-registration redundancy device of Ton in view of the protocol enhancements of Perkins, “*IP Mobility Support*, or the various references further cited, to achieve Applicant’s claimed invention of dependent Claims 4-6, which depend directly or indirectly from Independent Claim 1, dependent Claims 12-14, which depend directly or indirectly from Claim 10, and dependent Claims 18-20, which depend directly or indirectly from Independent Claim 15.

Accordingly, a *prima facie* case of obviousness has not been established. It respectfully submitted that Claims 4-6, 12-14, and 18-10 are allowable, and Applicant requests that the rejections of these claims be withdrawn.

3. Conclusion

As a result of the foregoing, the Applicant respectfully submits that Claims 1-23 in the Application are in condition for allowance, and respectfully requests an early allowance of such Claims.

If any issues arise, or if the Examiner has any suggestions for expediting allowance of this Application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at ksmith@texaspatents.com.

Appl. No. 09/981,268

Docket No. 14485RRUS01U

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Reply to Office Action mailed September 9, 2005

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Garlick Harrison & Markison Deposit Account No. 50-2126.

Respectfully submitted,

Date: December 9, 2005

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IN THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 5. The attached sheet replaces the original sheet containing Fig. 5. The attached sheet deleted the "Home Agent 3" marker. No new matter has been added by this amendment.